



# Electronic Filing System (EFS) Data

## Electronic Patent Application Submission

### USPTO Use Only

EFS ID: 55662

Application ID: 10673971



Title of Invention:  
Directional Signal and Noise  
Sensors for Borehole  
Electromagnetic Telemetry  
System

First Named Inventor: Paul Rodney

Domestic/Foreign Application: Domestic Application

Filing Date: 2003-09-29

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Filing Type:

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Attorney Docket Number: 1391-25206

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Trademark Office,ou=Department of Commerce,o=U.S. Government,c=US  
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## TRANSMITTAL

Electronic Version v1.1

Stylesheet Version v1.1.0

Title of Invention	Directional Signal and Noise Sensors for Borehole Electromagnetic Telemetry System	
Application Number:	10/673971	
Date:	2003-09-29	
First Named Applicant:	Paul F. Rodney	
Confirmation Number:	3957	
Attorney Docket Number:	1391-25206	
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Submitted by:	Elec. Sign.	Sign. Capacity
Albert C. Metrailer Registered Number: 27,145	Albert C. Metrailer	Attorney
Documents being submitted	Files	
us-ids	1391-25206-usidst.xml	
	us-ids.dtd	
	us-ids.xsl	
Comments		



## ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

Stylesheet Version v18.0

Title of Invention	Directional Signal and Noise Sensors for Borehole Electromagnetic Telemetry System																																																																																																															
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Art Unit:		2831																																																																																																														
Search string:		( 4199989 or 4215425 or 4878206 or 4980682 or 4992787 or 5289354 or 5467083 or 5565860 or 5627896 or 6023658 or 6188223 or 6285190 ).pn.																																																																																																														
<h3>US Patent Documents</h3> <p>Note: Applicant is not required to submit a paper copy of cited US Patent Documents</p> <table border="1"><thead><tr><th>init</th><th>Cite.No.</th><th>Patent No.</th><th>Date</th><th>Patentee</th><th>Kind</th><th>Class</th><th>Subclass</th></tr></thead><tbody><tr><td></td><td>1</td><td>4199989</td><td>1980-04-29</td><td>Forward et al.</td><td>73</td><td>430</td><td></td></tr><tr><td></td><td>2</td><td>4215425</td><td>1980-07-29</td><td>Waggener</td><td>367</td><td>83</td><td></td></tr><tr><td></td><td>3</td><td>4878206</td><td>1989-10-31</td><td>Grosso et al.</td><td>367</td><td>83</td><td></td></tr><tr><td></td><td>4</td><td>4980682</td><td>1990-12-25</td><td>Klein et al.</td><td>340</td><td>854</td><td></td></tr><tr><td></td><td>5</td><td>4992787</td><td>1991-02-12</td><td>Helm</td><td>340</td><td>854</td><td></td></tr><tr><td></td><td>6</td><td>5289354</td><td>1994-02-22</td><td>Clayer et al.</td><td>367</td><td>82</td><td></td></tr><tr><td></td><td>7</td><td>5467083</td><td>1995-11-14</td><td>McDonald et al.</td><td>340</td><td>854.6</td><td></td></tr><tr><td></td><td>8</td><td>5565860</td><td>1996-10-15</td><td>Sakata et al.</td><td>340</td><td>854.8</td><td></td></tr><tr><td></td><td>9</td><td>5627896</td><td>1997-05-06</td><td>Southward et al.</td><td>381</td><td>71</td><td></td></tr><tr><td></td><td>10</td><td>6023658</td><td>2000-02-08</td><td>Jeffries</td><td>702</td><td>16</td><td></td></tr><tr><td></td><td>11</td><td>6188223</td><td>2001-02-13</td><td>Van Steenwyk et al.</td><td>324</td><td>370</td><td></td></tr><tr><td></td><td>12</td><td>6285190</td><td>2001-09-04</td><td>Brune et al.</td><td>324</td><td>326</td><td></td></tr></tbody></table>									init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass		1	4199989	1980-04-29	Forward et al.	73	430			2	4215425	1980-07-29	Waggener	367	83			3	4878206	1989-10-31	Grosso et al.	367	83			4	4980682	1990-12-25	Klein et al.	340	854			5	4992787	1991-02-12	Helm	340	854			6	5289354	1994-02-22	Clayer et al.	367	82			7	5467083	1995-11-14	McDonald et al.	340	854.6			8	5565860	1996-10-15	Sakata et al.	340	854.8			9	5627896	1997-05-06	Southward et al.	381	71			10	6023658	2000-02-08	Jeffries	702	16			11	6188223	2001-02-13	Van Steenwyk et al.	324	370			12	6285190	2001-09-04	Brune et al.	324	326	
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Signature

Examiner Name	Date
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